

## **REMARKS / ARGUMENTS**

### **I. General Remarks**

Please consider the application in view of the following remarks. Applicants thank the Examiner for his careful consideration of this application, including the references that Applicants have submitted in this case and, pursuant to *Manual of Patent Examining Procedure* ("MPEP") § 609.02, all references submitted in the patent applications to which this application claims priority under 35 U.S.C. § 120.

Applicants hereby request continued examination in this application, in accordance with 37 C.F.R. § 1.114. Moreover, Applicants respectfully request reconsideration of the claims in light of the remarks contained herein.

### **II. Disposition of Claims**

Claims 1-38 are pending in this application. Of these, claims 7 and 11-38 were withdrawn in a previous response. Claims 39-68 were canceled in a previous response.

Claims 1-6 and 8-10 stand rejected under 35 U.S.C. § 102(e).

### **III. Rejections of Claims**

Claims 1-6 and 8-10 stand rejected under 35 U.S.C. § 102(e) as being anticipated by PCT Application Publication WO 03/056130 A1 by Couillet *et al.* (hereinafter "*Couillet*"). With respect to these rejections, the Final Office Action states:

The 35 U.S.C. §102 rejection of claims 1-6 and 8-10 as anticipated by PCT Application Publication Number WO 03/056130 A1 to Couillet *et al.*, hereinafter 'Couillet', is maintained for the same reasons previously set forth in items 3 and 5 on pages 2 and 3 of the Office Action of July 12, 2007 (hereinafter 'OA').

Applicant's arguments in the response to OA filed October 11, 2007 (hereinafter 'Response') with respect to the 35 U.S.C. 102(e) rejection of claims 1-6 and 8-10 as anticipated by Couillet have been fully considered but deemed unpersuasive.

Applicant's arguments in Response regarding the "allowing" step in independent claim 1 requiring the relative permeability modifier (RPM) to attach onto "a surface *within* the subterranean formation", as opposed to a surface of the subterranean formation," are misguided. A person of ordinary skill in the art would interpret the claim phrase "surface of the formation" to encompass any surface of a subterranean formation,

including the *inner* surfaces of a well or other subterranean formation.

Moreover, Couillet clearly discloses a method for recovering hydrocarbons by providing an aqueous viscoelastic fracturing fluid and injecting said fluid into formation rocks to fracture said rocks. (See, *e.g.*, item 17 on page 9 of the Office Action mailed July 3, 2006 citing page 4, line 10 to page 5, line 22 of Couillet, which discloses this injection process) As stated previously in item 5 of OA, because Couillet adds the same RPM polymer compound to a formation as encompassed by the method of the instant claims, then “at least a portion” of the permeability of the formation must inherently be “attaching” to the formation as disclosed in Couillet. A person skilled in the art would interpret the phrase “attaching to the formation” to encompass attaching to, *e.g.*, the surface of a formation rock, which, of course, is a surface *within* the subterranean formation.

Thus, the instant claims remain anticipated by Couillet.

(Final Office Action at 2-3.) Applicants respectfully disagree with this rejection.

In order to form a basis for a rejection under 35 U.S.C. § 102(e), a prior art reference must disclose each and every element as set forth in the claim. MPEP § 2131 (2007). Because *Couillet* does not disclose each and every element as set forth in the present claims, *Couillet* does not anticipate claims 1-6 and 8-10.

**A. *Couillet* Does Not Disclose Placing the Water-Soluble Relative Permeability Modifier into the Subterranean Formation During the Drilling Phase, as Recited by Independent Claim 1.**

First, Applicants respectfully submit that *Couillet* does not disclose “placing the water-soluble relative permeability modifier into the subterranean formation *during the drilling phase*,” as recited in Applicants’ independent claim 1. Rather, to the extent *Couillet* may disclose placing a water-soluble relative permeability modifier into a subterranean formation, *Couillet* only discloses introducing a hydrophobically-modified polymer into a subterranean formation as a fracturing fluid. *See Couillet*, page 4, line 28 to page 5, line 2. *Couillet* specifically states the fluids of that invention are fracturing fluids. *See Couillet*, page 8, lines 27-29 (The present invention concerns an aqueous fluid for use in the recovery of hydrocarbons such as oil and gas. *This aqueous fluid is a fracturing fluid.*) (emphasis added). *Couillet* fails to disclose introducing a water-soluble relative permeability modifier into a subterranean in any

fluid other than a fracturing fluid. As such, *Couillet* does not disclose placing the water-soluble relative permeability modifier into the subterranean formation during the drilling phase.

In the Office Action dated July 3, 2006, the Examiner argued that *Couillet* discloses drilling fluids and cited to Examples 10 and 12-14 and Figures 15-16 for support of this disclosure. (Office Action dated July 3, 2006 at 10.) While these specific portions may disclose the study of the leak properties (fluid-loss permeability) of sample fluids and a fluid comprising from about 1 to 10% modified chitosan having an 11-carbon hydrophobic side chain, there is no indication that these fluids are drilling fluids or even can be used as drilling fluids. *See Couillet*, Example 10; Examples 12-14; Figures 15-16. Thus these cited portions do not provide adequate support for disclosing the limitation of placing the water-soluble relative permeability modifier into the subterranean formation during the drilling phase.

**B. *Couillet* Does Not Disclose Allowing the Water-Soluble Relative Permeability Modifier to Attach onto a Surface Within the Subterranean Formation, as Recited by Independent Claim 1.**

Second, Applicants respectfully submit that *Couillet* does not disclose “allowing the water-soluble relative permeability modifier to attach onto a surface *within* the subterranean formation,” as recited in Applicants’ independent claim 1.

Applicants respectfully note that the Final Office Action continues to misstate the language of independent claim 1 as Applicants previously amended it. The Final Office Action refers to the claim phrase “surface *of* the subterranean formation,” in explaining the basis for the rejection of claim 1, and argues that “[a] person of ordinary skill in the art would interpret the claim phrase ‘surface of the formation’ to encompass any surface of a subterranean formation . . . .” However, there is no such language in claim 1. Rather, claim 1 clearly recites “allowing the water-soluble relative permeability modifier to attach onto a surface *within* the subterranean formation.” The Examiner has yet to assert that “a surface *within* the subterranean formation” could be interpreted to encompass those disclosed in *Couillet*. As demonstrated below, it cannot.

The Final Office Action asserts *Couillet* anticipates Applicants’ claims because “[a] person of ordinary skill in the art would interpret the claim [language] to encompass any surface of a subterranean formation, including the inner surfaces of a well or other subterranean formation.” Applicants respectfully disagree that the language of claim 1 can be interpreted in this manner. “The Patent and Trademark Office determines the scope of claims in patent

applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction ‘in light of the specification as it would be interpreted by one of ordinary skill in the art.’ Indeed, the rules of the PTO require that application claims must ‘conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.” See MPEP § 2111 (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316, 75 USPQ2d 1321, 1329 (Fed. Cir. 2005); MPEP § 2111.01 (“Claims are not to be read in a vacuum, and limitations therein are to be interpreted in light of the specification in giving them their broadest reasonable interpretation.” (citing *In re Marosi*, 710 F.2d 799, 802, 218 USPQ 289, 292 (Fed. Cir. 1983) and *In re Okuzawa*, 537 F.2d 545, 548, 190 USPQ 464, 466 (CCPA 1976))). Respectfully, the Final Office Action’s interpretation of the claim language “attach onto a surface within the subterranean formation” is improper because it ignores and directly contradicts Applicants’ explanation of this language in their specification.

Paragraph 0027 of the specification clearly explains the proper meaning of this claim language:

As filtrate from the drilling fluids ***leaks off*** into the subterranean formation, it is believed that the water-soluble relative permeability modifier, among other things, may attach to surfaces ***within*** the subterranean formation.

(Specification at ¶ 0027). Thus, Applicants’ invention contemplates that a substance is able to attach to surfaces “within” the subterranean formation only when that substance “leaks off” into the porosity of the subterranean formation. Applicants use this same language specifying a surface “within” the subterranean formation to claim their invention. Thus, in view of Applicants’ specification, a surface “within” the subterranean formation, as recited in claim 1, cannot be merely the “surface of a formation rock” or the walls of a well bore. Respectfully, the Final Office Action improperly reads the claim language “in a vacuum,” ignores this description of the invention, and cites nothing from Applicants’ specification or anything else in the art to support its contrary interpretation.

Under the proper interpretation of Applicants’ claims, *Couillet* cannot anticipate these claims because it does not disclose allowing a water-soluble relative permeability modifier to attach onto a surface within a subterranean formation. Applicants incorporate by reference all

of their remarks in their response filed on October 11, 2007 demonstrating that *Couillet* does not disclose this element. *Couillet* repeatedly indicates that the fluid carrying a hydrophobically-modified polymer will **not** leak off into the subterranean formation such that the polymer may attach to a surface within the formation, and specifically states that one of the benefits of the system described therein is that it will form an “external polymer filter cake” that **prevents** leak-off of the fluid into the formation. (*Couillet* at page 31, lines 9-10 & 31-33). In contrast, the relative permeability modifiers of the present invention attach to a surface within the formation when fluid leak-off occurs. (Specification at ¶ 0027). Because the external filter cake in *Couillet* prevents such leak-off into the formation, the fluids described therein will not be able to penetrate the subterranean formation such that the hydrophobically-modified polymer may contact or attach to surfaces **within the porosity** of that formation. As such, *Couillet* does not disclose allowing the water-soluble relative permeability modifier to attach onto a surface within the subterranean formation.

**C. The Relative Permeability Modifiers Disclosed in *Couillet* Would Not Inherently Attach Onto a Surface within the Subterranean Formation**

Third, the relative permeability modifiers disclosed in *Couillet* would not inherently attach onto a surface within the subterranean formation. Although Applicants demonstrated previously, and above in Section III (B), that *Couillet* does not disclose allowing the water-soluble relative permeability modifiers to attach onto a surface within the subterranean formation, the Examiner maintains that “because *Couillet* adds the same RPM polymer compound to a formation as encompassed by the method of the instant claims, then “at least a portion” of the permeability of the formation must inherently be “attaching” to the formation as disclosed in *Couillet*.” (Final Office Action at 3.) However, in order to inherently disclose an element in a claim, “the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art,” and that it would be so recognized by persons of ordinary skill. MPEP at § 2112. “Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Id.* Applicants’ relative permeability modifiers would not necessarily possess the same physical properties when introduced into the subterranean formation as the relative permeability modifiers disclosed in *Couillet*. The relative permeability modifiers disclosed in

*Couillet* are only introduced into the subterranean formation as an aqueous viscoelastic gel comprising the relative permeability modifier and a viscoelastic surfactant. *See Couillet*, page 16 lines 9-27. Interactions between the relative permeability modifier and the surfactant cause the fluid of *Couillet* to become an aqueous viscoelastic gel. *See Id.* The pendant groups of the relative permeability modifier interact with the long micelles formed by the viscoelastic surfactant, creating an overlapping network. *See Id.* These interactions alter how the relative permeability modifier effects the subterranean formation. Indeed, as demonstrated above in Section III (B), the relative permeability modifiers disclosed in *Couillet* do not effect the subterranean formation the same way as Applicants' relative permeability modifiers. Thus it cannot not be assumed that Applicants' relative permeability modifiers would possess the same physical properties when introduced into a subterranean formation as the relative permeability modifiers disclosed in *Couillet*. As such, the relative permeability modifiers disclosed in *Couillet* would not inherently attach onto a surface within the subterranean formation.

**D. Request Withdrawal of § 102(e) Rejection.**

Therefore, Applicants respectfully assert that independent claim 1 is not anticipated by *Couillet*. Moreover, claims 2-6 and 8-10 depend, either directly or indirectly, from independent claim 1. All these dependent claims include all the limitations of the independent claim from which they depend on, and thus are allowable for at least the reasons cited above with respect to independent claim 1. *See* 35 U.S.C. § 112 ¶ 4 (2004). Applicants therefore request withdrawal of these rejections.

**IV. No Waiver**

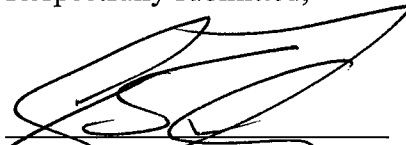
All of Applicants' arguments and amendments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the cited references. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements. The amendments and example distinctions discussed by Applicants are sufficient to overcome the rejections of the claims.

**SUMMARY**

In light of the above remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

The Commissioner is hereby authorized to debit Baker Botts L.L.P.'s Deposit Account No. 02-0383, Order Number 063718.0411, in the amount of \$810.00 for the RCE fee under 37 C.F.R. § 1.17(e). Should the Commissioner deem that any additional fees are due, including any fees for extensions of time, the Commissioner is authorized to debit Baker Botts L.L.P.'s Deposit Account No. 02-0383, Order Number 063718.0411, for any underpayment of fees that may be due in association with this filing.

Respectfully submitted,

  
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